Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

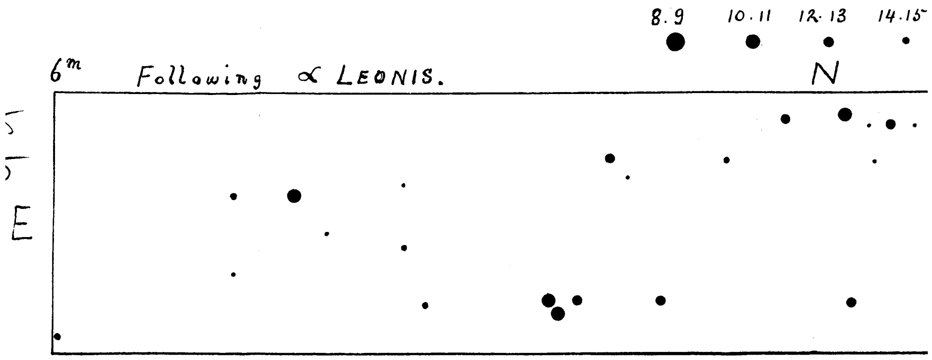
Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

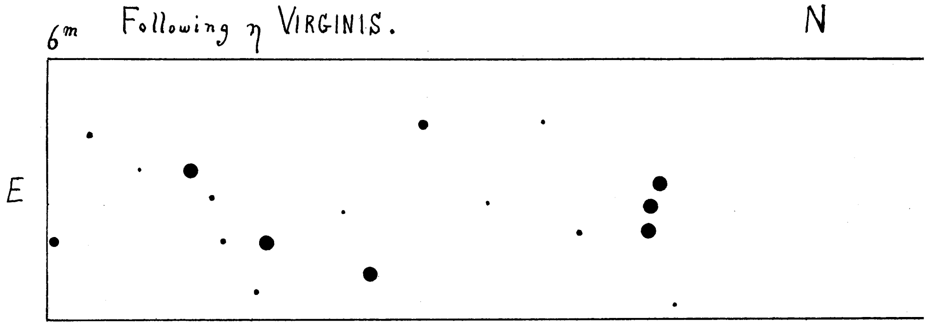
Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

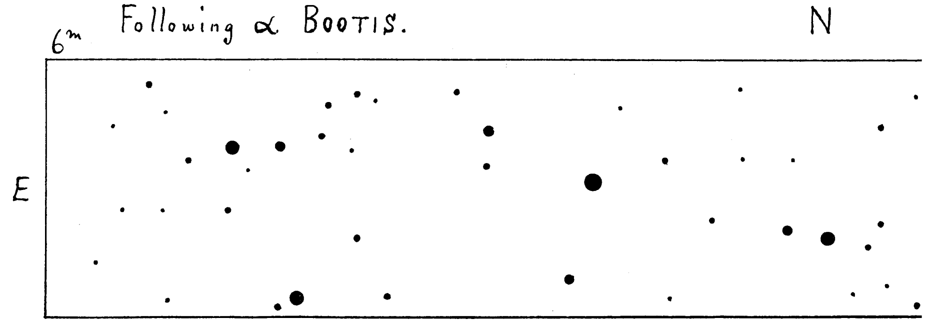
Following α LEONIS.



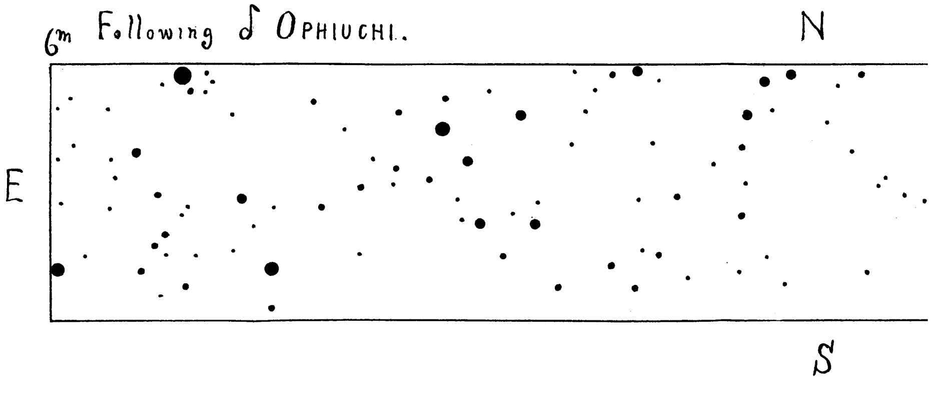
Following η VIRGINIS.

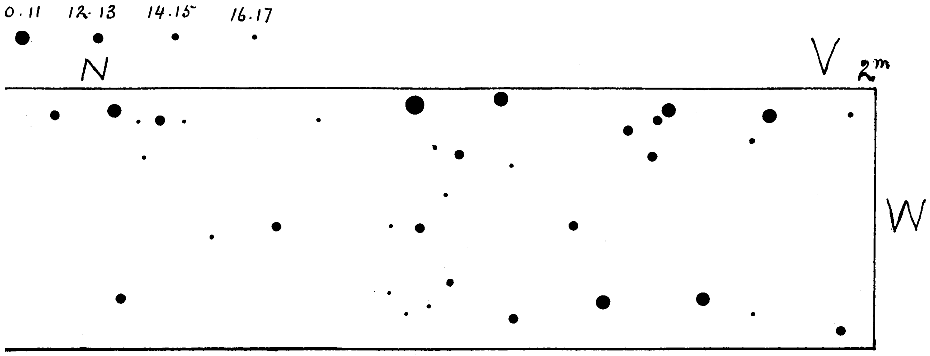


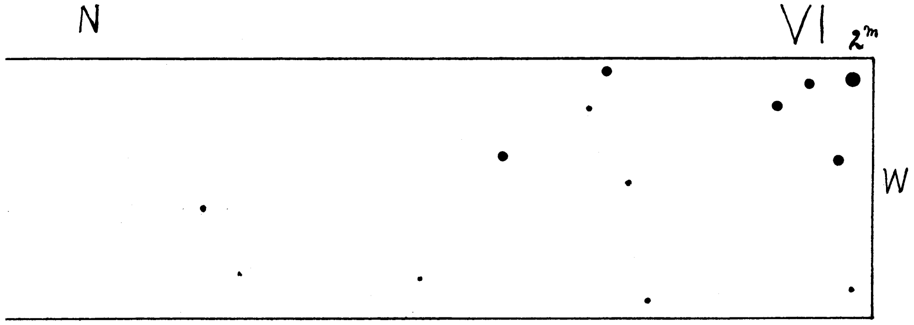
Following α BOOTIS.

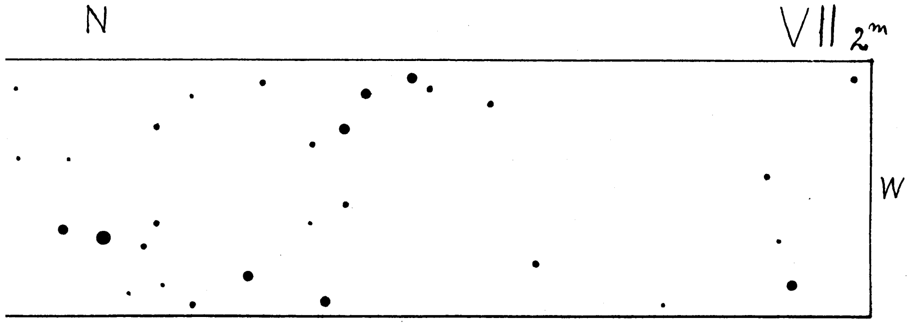


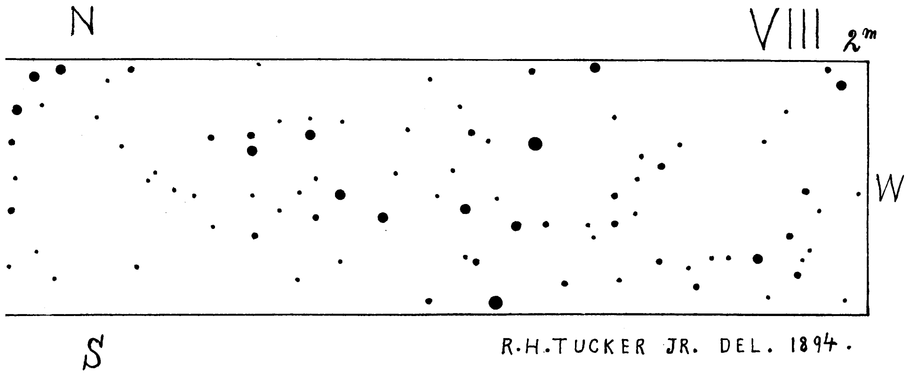
Following δ OPHIUCHI.











R.H.TUCKER JR. DEL. 1894.

The case seems to us to be like that of the Moon seen with the naked eye. Irradiation at specially bright regions may distort the full limb, but "prominences" are observed only at the terminator.

It is true, as Professor PICKERING states, that different observers of the LICK Observatory now hold different opinions as to the figure and revolution time of the first satellite of *Jupiter*. However our differences of opinion on this difficult point may eventually be settled, our observations have already shown that Professor PICKERING'S discoveries cannot be verified here. Nor have his conclusions of 1892 been confirmed at any other observatory.

CHARTS OF FAINT STARS FOR MAGNITUDE COMPARISON. (SECOND SERIES.)

By R. H. TUCKER, JR.

The series of charts V to VIII is in continuation of those printed in No. 32 of these *Publications*. Each begins at Right Ascension 2^m following some bright star, and extends 4^m, with a width of 10′ in Declination, 5′ each side of the bright star.

The charts as filled in at Harvard College Observatory with the 15-inch telescope, and further at Washington with the 26-inch, have in general been adopted without change, except for the omission in these charts of stars not seen here.

The stars are graded in five divisions, the highest, 8.9, including all stars brighter; the lowest grade, 16.17, is made up entirely of stars newly introduced; but a number of the new stars have been put in the next higher grade, 14.15. The charts follow the bright stars below :

			H.	M.	°		
V	follows	α *Leonis*	10	2	+12	29	1893
VI	"	η *Virginis*	12	14	+ 0	4	"
VII	"	α *Bootis*	14	10	+19	44	"
VIII	"	δ *Ophiuchi*	16	8	− 3	25	"

The number of stars in the charts before filling in with the

36-inch telescope, and the number of stars added, are as follows, omitting from the original number those not seen by me :

	Original.	New.	Total.
V	33	17	50
VI	23	8	31
VII	24	35	59
VIII	61	100	161

The stars of the completed charts fall in the following grades :

8.9	magnitude and brighter,	3
10.11	"	24
12.13	"	51
14.15	"	86
16.17	"	137

The observations were made with a power of 350, on the 36-inch telescope, giving a field of 5′.

Lick Observatory, July 20, 1894.

(SEVENTEENTH) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to Professor J. M. Schaeberle for his discovery of an unexpected comet on the negatives of the eclipse of April 16, 1893.

The Committee on the Comet-Medal,

Edward S. Holden,
Chas. Burckhalter.

July 24, 1894.

THE SPECTRUM OF MARS.

By W. W. Campbell.

The spectrum of *Mars* has been observed by several eminent astronomers — Rutherfurd, Secchi, Janssen, Huggins, Vogel, Maunder. These observers had especially in mind the solution of two questions : (*a*) Is there spectroscopic evidence of an *atmosphere* on *Mars?* and (*b*) Is there spectroscopic evidence of *aqueous vapor* in the atmosphere of *Mars?*